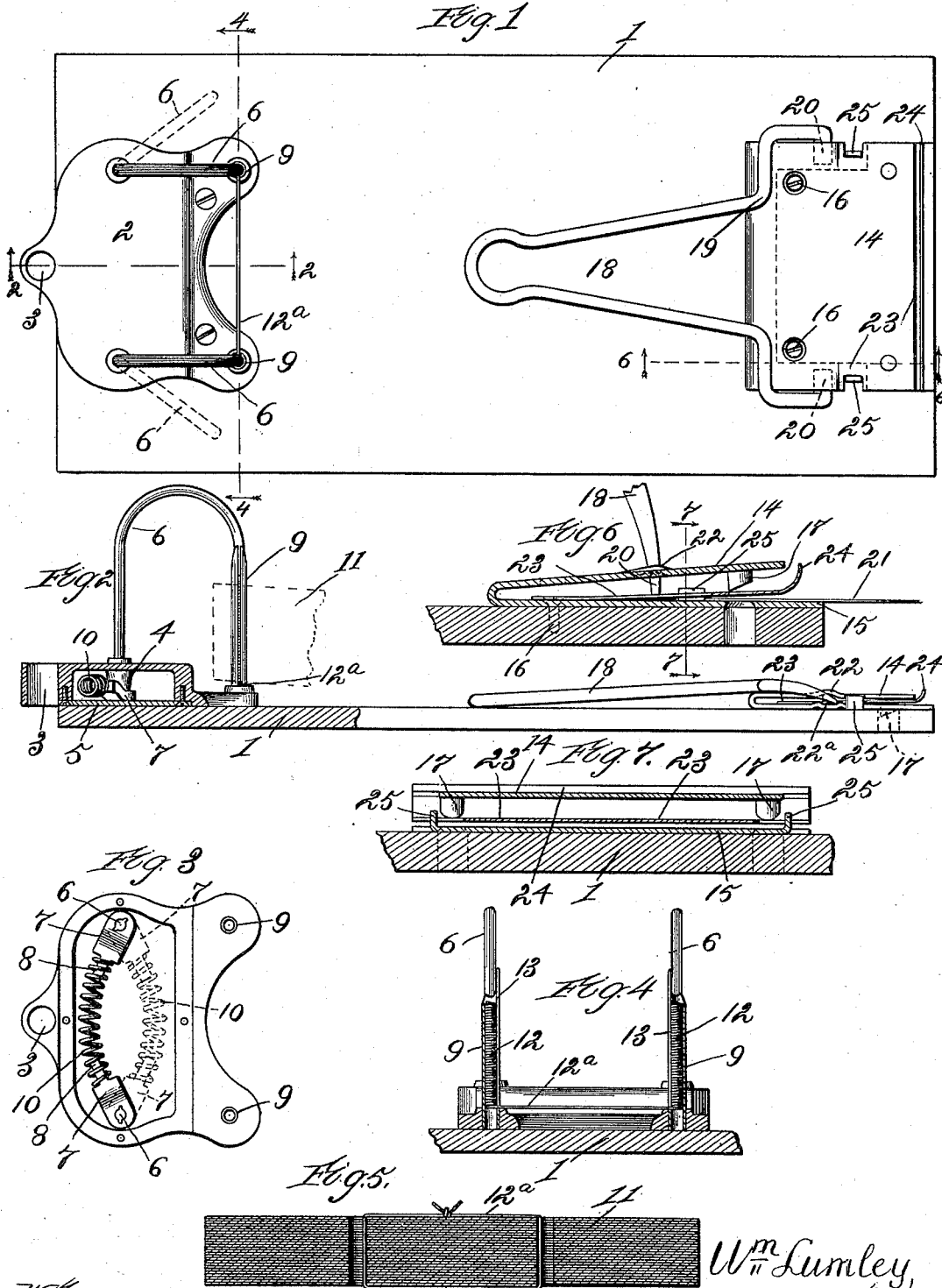


(No Model.)

W. LUMLEY.
LETTER OR BILL FILE.

No. 586,134.

Patented July 13, 1897.



Witnesses:

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UNITED STATES PATENT OFFICE.

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LETTER OR BILL FILE.

SPECIFICATION forming part of Letters Patent No. 586,134, dated July 13, 1897.

Application filed March 12, 1894. Serial No. 503,228. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LUMLEY, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Letter or Bill Files, of which the following is a full, clear, and exact specification.

My invention relates to that class of files which have rotatable guard-wires for preventing the accidental withdrawal of the papers from the impaling-pins.

My invention also relates to improvements in the punch which usually accompanies such files for perforating the papers preparatory to being placed on the impaling-pins.

One of the objects of my invention is to provide the impaling-pins with supplementary impaling-pins, so that the papers may be impaled upon the regular pins and such supplementary pins simultaneously, and the supplementary pins may be removed with the bundle of papers thereon and utilized for binding the papers together preparatory to filing in permanent files.

A further object is to improve and simplify the punch, whereby the same will operate to punch the papers automatically and will serve as a clamp for holding the lower ends of the papers flat.

With these ends in view my invention consists in certain features of novelty described and claimed herein, and shown in the accompanying drawings.

In the said drawings, Figure 1 is a plan view of the file, showing the guard-wires in their thrown-off position in dotted lines. Fig. 2 is a transverse sectional view, partly in side elevation, taken on the line 2 2, Fig. 1. Fig. 3 is the bottom plan of the casting upon which the impaling-pin and guard-wires are mounted, the bottom plate thereof being removed. Fig. 4 is a transverse sectional view taken on the line 4 4, Fig. 1. Fig. 5 is a transverse sectional view of a bundle of papers, showing the manner of binding them together by means of the supplementary impaling-pins. Fig. 6 is an enlarged longitudinal sectional view taken on the line 6 6, Fig. 1, showing a paper in position to be punched; and Fig. 7 is a transverse sectional view taken on the line 7 7, Fig. 6.

Like signs of reference indicate like parts throughout the several views.

1 represents the base-board, upon one end of which is secured a casting 2, which may be provided with the usual eyelet 3, by means of which the file may be hung up. The casting 2 is preferably a box-like structure having formed on its inner side two bosses 4, which project inwardly within a short distance of the bottom plate 5, the latter being secured to the under side of the casting in any suitable way. The bosses 4 are each provided with a central bore through which passes the usual guard-wire 6, whose inner end protrudes slightly beyond the lower end of the boss and has swaged or otherwise secured against rotation thereon a crank-arm 7. These crank-arms 7 project toward each other, as shown in Fig. 3, and one end of each is of sufficient thickness to substantially fill up the space between the inner end of the boss 4 and the plate 5, so that the crank-arm takes its bearing on one side against the end of the boss and on the other side against the plate 5. The inner ends of the crank-arms are curved upwardly and then bent in a horizontal direction and terminate in stems 8, which are preferably disposed about midway between the top of the casting 2 and the plate 5, so as to be capable of springing or oscillating between these two parts without friction other than that caused by their outer ends.

9 are the impaling-pins, which are hollow, as usual, and have their upper ends open and beveled on the outer sides, and when the guard-wires 6 are resting against the impaling-pins in their normal position, as shown in Figs. 1, 2, and 4, the crank-arms 7 are supposed to be turned backward a little bit beyond a straight line drawn through the centers of the bosses 4, and when the guard-wires are in their thrown-off position, as shown in dotted lines in Fig. 1, such crank-arms are supposed to be deflected to the opposite side of such line, as shown in dotted lines in Fig. 3. In order that the crank-arms may be held in either of these positions, as desired, and the guard-wires 6 held in or out of their normal positions, I crowd between these crank-arms, so as to form a bearing against both, some suitable form of cushion, which as soon as the ends of the arms pass

the center on one side will throw them to the extreme of their movement on that side. As a simple and effective means of accomplishing this I employ a coil-spring 10, whose ends are inserted through the stems 8, respectively, the spring being slightly compressed while in either of the positions shown in Fig. 3, so as to exert a normal tendency to deflect the arms in the direction in which they are turned, thus holding the spring in place and preventing the guard-wires from returning to their normal position without the application of pressure from the hand of the operator. The spring 10 is sufficiently less in diameter than the space between the top of the casting 2 and the plate 5 to permit it to oscillate therein without striking either of such parts.

The papers 11 (shown in dotted lines in Fig. 2) after having been punched are impaled on the pins 9 in the usual manner. In many instances after a file becomes full—that is, when the thickness of the papers rises to the upper ends of the pins 9—it is desirable to remove the bunch of papers and to lay them aside temporarily until the end of the month or other convenient time, when they are filed away in permanent files. The papers after being removed from the file are of course liable to become misplaced, and in order to avoid this objection I provide the impaling-pins with supplementary impaling-pins, which may be withdrawn with the papers and serve to bind them together after they are removed. These supplementary impaling-pins consist of a wire 12, whose ends are crowded down in the hollow impaling-pins 9, preferably by forming them into coils, as shown in Fig. 4, the lower ends of such coils being connected together by a straight portion 12^a of the wire, which passes through a vertical slot 13 in the inner side of each of the impaling-pins, so that the coiled portions may be inserted in the pins 9, respectively, and will be connected together on the under side of the bunch of papers when removed.

The purpose of crowding the ends of the wire 12 down into the impaling-pins 9 in this manner is to enable me to use a wire whose vertical ends, which form the supplementary impaling-pins, will be of greater length than the pins 9 and at the same time will not interfere with the filing of the papers. After the file becomes full the guard-wires 6 are thrown off and the operator inserts his finger under the portion 12^a and removes the supplementary impaling-pins, together with the bundle of papers, the coiled portions of the wire 12 occupying the perforations therein, as will be understood. After this has been done a slight compression of the bunch of papers will cause the upper ends of the coils to protrude slightly above the top sheet, whereupon the operator by grasping them may draw their ends together and by giving them a turn or twist bind the papers, as shown in Fig. 5.

The punch for perforating the papers for the reception of the impaling-pins 9 consists of a spring-plate folded over on itself, so as to constitute two folds, an upper one 14 and a lower one 15, which have a normal tendency to approach each other, the lower one being secured by screws 16 to the base-board 1 and having perforations through which the dies or punches 17 pass, the device being provided with means for gaging the papers and stripping them from the dies and also with means for forcing the plates apart after the punching operation is completed.

The folded plate being constructed of spring metal, the punch operates to perforate the papers automatically as soon as the upper fold 14 of the plate is released, no additional pressure being necessary unless an unusually large number of papers is placed under the punch. In order, however, that such additional pressure may be applied, if desired, I provide the handle 18 with offsets or elbows 19, which project inwardly or toward each other, so that when the handle is thrown toward the free end of the fold 14 the elbows 19 will bear upon the upper side of such fold.

The handle 18 is preferably constructed of a single bar or wire having flattened ends 20, arranged between the folds of the plate so as to be pinched thereby, so that when the handle is raised to an upright position, as shown in Fig. 6, the folds 14 and 15 will be forced apart ready for the insertion or withdrawal of the paper 21, and when tipped to either side of this position it will be forced downward, either with its elbows 19 resting upon the fold 14 or with its upper end bearing upon the papers on the board 1, and serving as a clamp to hold the lower ends of such papers in place.

As a simple and improved manner of holding the flattened ends 20 against displacement I pinch the upper fold 14, as shown at 22; immediately above each of such flattened ends, so as to form slight recesses in which such ends engage, the lower fold 15 being also pinched up, as shown at 22^a, Fig. 2.

23 is a stripper and guide-plate provided with perforations for the passage of the dies 17 and serving to strip the papers from such dies when the upper fold of the spring-plate is raised. The forward end of the plate 23 is bent upward, as shown at 24, so as to prevent the papers from being inserted between the fold 14 and the upper side of the plate 23. The plate 23 on each side is cut away or narrowed, as shown in dotted lines in Fig. 1, in order to afford room for two parallel projecting catches 25, which stand up across the space between the under side of the plate 23 and the upper side of the fold 15, and thus limit the inward movement of the papers, whereby the perforations will be at a uniform distance from their edges. As a convenient and improved way of providing these catches I strike up a tongue on each edge of the lower fold 15 and at the same time I notch each edge

of the upper fold 14 immediately above them, as shown in Figs. 1 and 7, to permit such upper fold to descend without obstruction.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination of hollow, slotted impaling-pins, with supplementary impaling-pins inserted within said hollow pins, and having their lower ends connected together, substantially as set forth.

2. The combination of hollow, slotted, open-ended impaling-pins, a base in which the ends of said pins are secured, and supplementary impaling-pins inserted within said hollow pins and having their lower ends connected together, substantially as set forth.

3. The combination of hollow, slotted impaling-pins with an extensible strip or wire having its ends located within said impaling-pins, respectively, substantially as set forth.

4. The combination with the impaling-pins, of supplementary impaling-pins consisting of coils telescoped with said impaling-pins, and having their lower ends connected together, substantially as set forth.

5. In a punch for letter-files, the combination of a folding spring-plate having dies or punches and openings therefor, and means for spreading the folds of said plate apart, said folds having a normal tendency to come together, substantially as set forth.

6. In a punch for letter-files, the combination with a plate having openings for the dies, of a spring carrying said dies and exerting a normal tendency to approach said plate, and a handle for withdrawing the dies, substantially as set forth.

7. In a punch for letter-files, the combination of a folded spring-plate having punches or dies and openings therefor, and a handle or lever having flattened ends arranged between the folds of said plate for spreading them apart, substantially as set forth.

8. In a punch for letter-files, the combination of a folded spring-plate having punches or dies and openings therefor, and a handle or lever having flattened ends arranged between the folds of said plate, and said plate being provided with recesses for said flattened ends, substantially as set forth.

9. In a punch for letter-files, the combination of a folded spring-plate having punches or dies and openings therefor, and means for spreading the folds of said plate apart, the edges of one of said folds having struck-up tongues and the other fold having notches for the passage of said tongues, so as to form gages for the papers, substantially as set forth.

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Witnesses:

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